

**REMARKS/ARGUMENTS**

Reconsideration of this application is requested. Claims 1, 2 and 4-14 are in the case.

**I. THE ANTICIPATION REJECTION**

Claims 1, 2 and 4-14 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by "Solubility of ethylene, 1-butene and 1-hexene in polyethylenes" Chemical Engineering Science 56, 4121-4129. Steven J. Moore and Sieghard E. Wanke (the Chemical Engineering Science reference); or USP 5,462,531; or DE 4216960. The rejection is respectfully traversed.

As claimed, the process of the invention is for the separation of volatile material from particulate polymer which has been substantially freed from unreacted monomer in an earlier separation step using an inert gas. The process comprises: (a) feeding the particulate polymer to a purge vessel and causing it to move through the vessel in substantially plug-flow mode, (b) heating the particulate polymer in the purge vessel to a temperature greater than 30°C but insufficiently high to cause the particles to become agglomerated, and/or maintaining the polymer at a temperature in this range in the purge vessel, and (c) feeding gas to the purge vessel to remove volatile material therefrom, removing the particulate polymer from the purge vessel. Substantially all of the heating of the particles which occurs in the purge vessel is accomplished by preheating the gas fed into the purge vessel and at least a portion of the gas fed to the purge vessel enters the vessel at one or more points located closer to the top of the vessel than to the bottom.

An important feature of the claimed invention is that the polymer has been substantially freed from unreacted monomer in an earlier separation step using an inert gas. In addition, the polymer is heated using preheated gas, at least some of which enters the purge vessel nearer the top than the bottom.

The Chemical Science Engineering reference concerns the technical background of monomers dissolved in polymers. At page 2 of the Action, a summary of what is allegedly disclosed by the Chemical Science Engineering reference is provided, but there is no analysis in the Action of how the Chemical Science Engineering reference discloses the claimed step methodology of claim 1. The Action states (page 2) that the Chemical Science Engineering reference describes "a gravimetric method used to measure the solubility of ethylene, 1-butene and 1-hexene for four polyethylene samples with different crystallinities and branching structures." There is no discussion in the Action of how this disclosure is relevant to the claimed process for separating volatile material from particulate polymer which has been substantially freed from unreacted monomer in an earlier separation step using an inert gas. There is no discussion in the Action of where, in the Chemical Science Engineering reference, there is a disclosure of the steps of: (a) feeding the particulate polymer to a purge vessel and causing it to move through the vessel in substantially plug-flow mode, (b) heating the particulate polymer in the purge vessel to a temperature greater than 30°C but insufficiently high to cause the particles to become agglomerated, and/or maintaining the polymer at a temperature in this range in the purge vessel, and (c) feeding gas to the purge vessel to remove volatile material therefrom, removing the particulate polymer from the purge vessel, wherein substantially all of the heating of the particles which

occurs in the purge vessel is accomplished by preheating the gas fed into the purge vessel and at least a portion of the gas fed to the purge vessel enters the vessel at one or more points located closer to the top of the vessel than to the bottom. The Chemical Science Engineering reference does not appear to be relevant to the invention as claimed in claim 1. Withdrawal of the anticipation rejection based on the Chemical Science Engineering reference is respectfully requested.

DE 4216960 is concerned with **cooling** polymer chips by introducing a cooling medium at the **bottom** of the silo. There is no disclosure of adding any gaseous medium higher up the vessel, and no disclosure relating to the arrangement prior to the silo which would be relevant to the pre-treatment step using an insert gas, as specified at the beginning of claim 1. Again, the Action presents a discussion of what is allegedly disclosed by DE 4216960 but does not indicate how this disclosure is relevant to the claimed process for separating volatile material from particulate polymer which has been substantially freed from unreacted monomer in an earlier separation step using an inert gas. There is no discussion in the Action of where in DE 4216960 there is a disclosure of the steps (a) through (c) of the claimed process. Withdrawal of the anticipation rejection based on DE 4216960 is respectfully requested.

The Action describes in detail the disclosure of USP 5,462,531 (the '531 patent) which relates to a syringe, and has absolutely nothing whatsoever to do with the process as claimed. As discussed below, the '531 patent was cited erroneously. Withdrawal of the anticipation rejection based on the '531 patent is respectfully requested.

**II. INFORMATION DISCLOSURE STATEMENT**

As noted above, US 5,462,531 relates to a syringe, and is clearly irrelevant to the present case. The patent number US 5,462,531 recited in the IDS is wrong, and should have referred to US 5,462,351. A corrected IDS is submitted herewith. Entry is respectfully requested.

US 5,462,351 (the '351 patent) is likewise not relevant to the presently claimed invention. The '351 patent relates to a gas conditioning vessel for bulk solids undergoing mass flow. The gas is introduced into the solids through an open bottom distributor forming a plenum. The plenum opens into the vessel at its bottom, the injection sites being bounded by vertical walls of the distributor. The vertical configuration optimizes solids pressure at these sites to suppress localized fluidization and flow instability due to stress conditions (the '351 patent, Abstract). The '351 patent does not disclose the presently claimed step methodology.

**III. CLAIM AMENDMENTS**

The claims have been amended to improve their form. No new matter is entered.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. **14-1140**.

COUSIN et al  
Appl. No. 10/531,481  
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Favorable action is awaited.

Respectfully submitted,

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